

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2002-195218

(43)Date of publication of application : 10.07.2002

(51)Int.Cl.

F15B 21/14

E02F 9/20

H01M 8/00

H01M 8/06

(21)Application number : 2000-395276

(71)Applicant : SHIN CATERPILLAR MITSUBISHI  
LTD

CATERPILLAR INC

(22)Date of filing : 26.12.2000

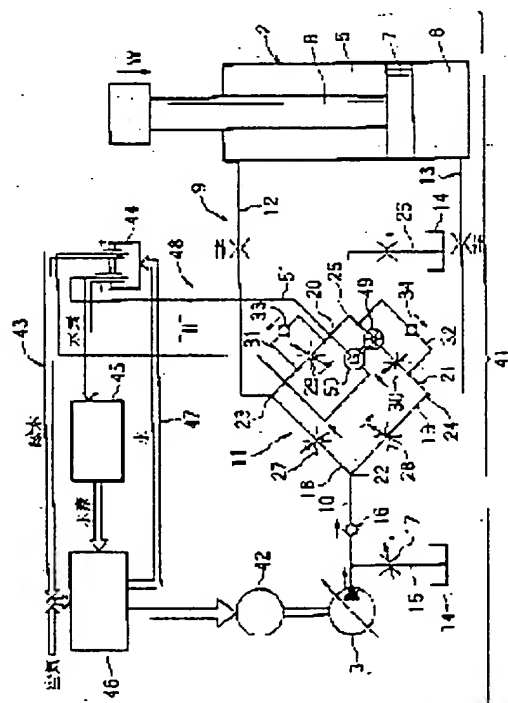
(72)Inventor : YOSHINO KAZUNORI

## (54) ENERGY REGENERATIVE APPARATUS FOR CONSTRUCTION EQUIPMENT

### (57)Abstract:

PROBLEM TO BE SOLVED: To provide an energy regenerative apparatus that can enhance energy efficiency without harming environment.

SOLUTION: In construction equipment that works by expanding a hydraulic cylinder 2 by introducing a pressurized fluid from a hydraulic pump 3, this energy regenerative apparatus 41 regenerates the energy of the pressurized fluid introduced into the cylinder 2. The energy regenerative apparatus 41 has an electric motor 42, a fuel cell 46, and a regenerative electric power generation means 48. The electric motor 42 drives a hydraulic pump 3 as a power source. The fuel cell 46 supplies the electric power to the electric motor. The electric power generation means 48 generates electric power by the energy of a discharged fluid in the fluid circuit discharged from the cylinder 2 when the cylinder 2 is contracted. The electric power, generated by the generation means 48, electrolyzes water in an electrolysis tank 4 and then generates oxygen and hydrogen. Therefore, the generated oxygen and hydrogen can be used in the fuel cell 46.



LEGAL STATUS

[Date of request for examination] 09.08.2001

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]